IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

---

1. (previously presented) A system comprising:

an external non-dedicated memory including a plurality of memory banks;

a first agent having a single clock signal adapted to access a first memory portion including a first number of said plurality of memory banks; and

a second agent lacking a dedicated clock, receiving said memory access clock signal from said first agent, and having a clock signal representation of said first agent's clock signal adapted to access a second memory portion including a second number of said plurality of memory banks;

said first number and said second number being variable.

2. (original) The system according to claim 1, further comprising:

a register to set at least one of said first number and said second number.

3. (original) The system according to claim 1, wherein:

said register is adapted to be set by either one of said first agent and said second agent.

4. (original) The system according to claim 1, wherein:

a value set in said register is adapted to correspond to said first number of said plurality of memory banks.

5. (original) The system according to claim 1, wherein:

said second number is a remainder of said plurality of said memory banks after said first number of said plurality of memory banks.

6. (original) The system according to claim 1, wherein:

said first agent is a first digital signal processor; and

said second agent is a second digital signal processor.

7. (previously presented) A system comprising:

a plurality of agents;

an external non-dedicated shared memory block accessible by each of said plurality of agents, said external non-dedicated shared memory block including a plurality of memory banks;

a register adapted to partition said external non-dedicated shared memory block into a plurality of partitions each of said plurality of partitions being accessible by a unique group of said plurality of agents; and

said plurality of partitions each comprise a number of said plurality of memory banks;

wherein said plurality of agents, lacking a dedicated clock signal, receive a base clock signal from another agent and access said external non-dedicated shared memory block with clock signal representations of a base clock signal.

8. (original) The system according to claim 7, wherein:

said register is setable by at least one of said plurality of agents.

9. (canceled)

10. (original) The system according to claim 1, wherein:

said memory is synchronous memory.

11. (original) The system according to claim 1, wherein:

said memory is asynchronous memory.

12. (original) The system according to claim 10, wherein:

said synchronous memory is synchronous dynamic random access memory.

13. (previously presented) A system for providing access to shared external non-dedicated memory, said system comprising:

a first agent to provide a single memory access clock signal to allow said first agent to access said shared external non-dedicated memory; and

a second agent lacking a dedicated clock, receiving said single memory access clock signal from said first agent, to provide a representation of said single memory access clock signal to access said shared external non-dedicated memory in synchronism with said access by said first agent to said shared external non-dedicated memory;

wherein each of said first agent and said second agent may access different portions of said shared external non-dedicated memory simultaneously.

14. (previously presented) The system for providing access to shared memory according to claim 13, wherein:

said shared memory services in turn said first agent and said second agent without a wait state therebetween.

15. (original) The system for providing access to shared memory according to claim 13, wherein:

said shared memory block is partitioned such that said first agent has access to a first partition of said shared memory block; and

said second agent has access to a second partition of said shared memory block.

16. (original) The system for providing access to shared memory according to claim 13, wherein:

said first agent is a first digital signal processor; and

said second agent is a second digital signal processor.

17. (previously presented) A method of synchronizing access from a plurality of agents to external non-dedicated shared memory, comprising:

providing a single memory access clock signal;

providing a representation of said single memory access clock signal in synchronism with said single memory access clock signal;

firstly accessing a portion of said external non-dedicated shared memory from a first agent based on said single memory access clock signal;

secondly accessing a portion of said external non-dedicated shared memory from a second agent based on said representation of said single memory access clock signal received from said first agent;

wherein said step of secondly accessing said external non-dedicated shared memory follows said step of firstly accessing without a wait state therebetween.

18. (previously presented) The method of synchronizing access from a plurality of agents to shared memory according to claim 17, further comprising:

regenerating in said second agent said single memory access clock signal.

19. (previously presented) The method of synchronizing access from a plurality of agents to shared memory according to claim 17, wherein:

said first agent provides said single memory access clock signal.

20. (previously presented) A method of partitioning an external non-dedicated shared memory, comprising:

setting a configuration register to partition said external non-dedicated shared memory into a first plurality of memory banks and a second plurality of memory banks;

accessing said first plurality of memory banks from a first agent;

accessing said second plurality of memory banks from a second agent; and

re-partitioning said external non-dedicated shared memory on-the-fly;

wherein said second agent lacks a dedicated clock and receives a clock signal representation of said first agent's clock signal for a second agent's access to said non-dedicated shared memory.

21. (original) The method of partitioning a shared memory according to claim 20, wherein:

said step of re-partitioning is performed from said first agent.

22. (previously presented) Apparatus for synchronizing access from a plurality of agents to shared memory, said apparatus comprising:

means for providing a single memory access clock signal;

means for firstly accessing said shared memory from a first agent based on said single memory access clock signal;

means for secondly accessing said shared memory from a second agent based on said single memory access clock signal;

wherein said means for second accessing accesses said shared memory without a wait state after said means for firstly accessing said shared memory accesses said shared memory.

23.   (previously presented) Apparatus for partitioning a shared memory, said apparatus comprising:

means for setting a configuration register to partition said shared memory into a first plurality of memory banks and a second plurality of memory banks;

means for accessing said first plurality of memory banks from a first agent;

means for accessing said second plurality of memory banks from a second agent that receives a clock signal representation of said first agent's clock signal and lacks a dedicated clock; and

means for re-partitioning said shared memory on-the-fly.